

Fig. 1

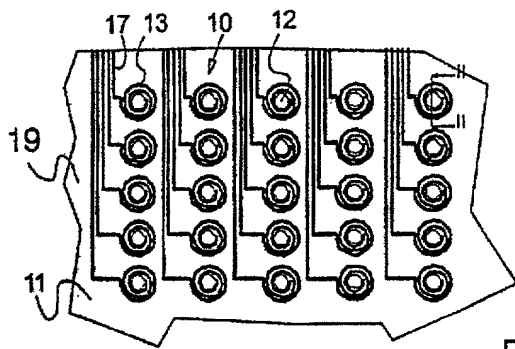


Fig. 2

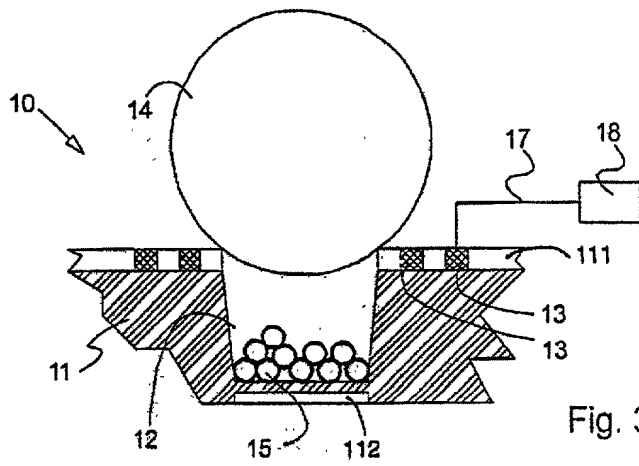


Fig. 3

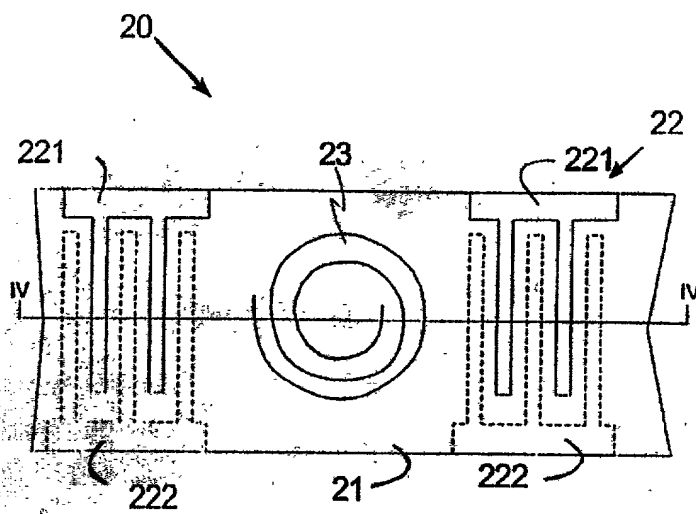


Fig. 4

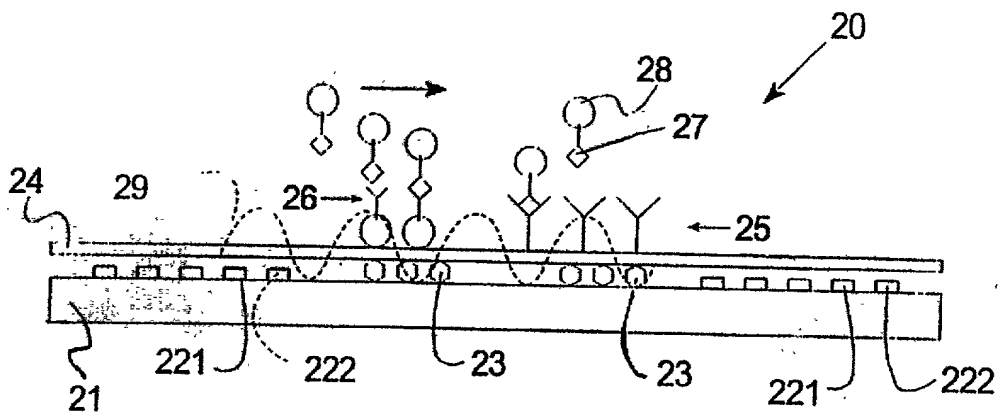


Fig. 5

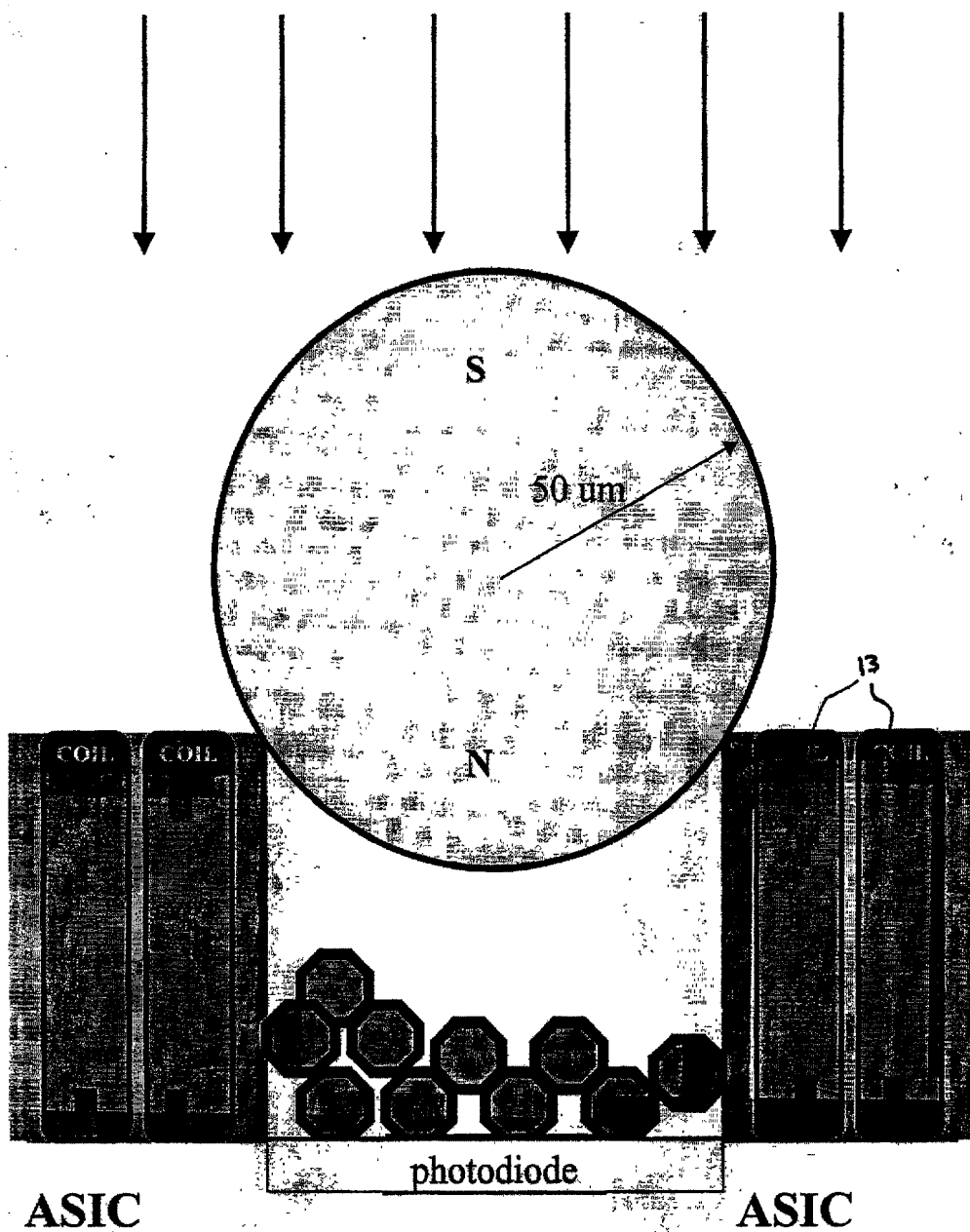


Figure 6

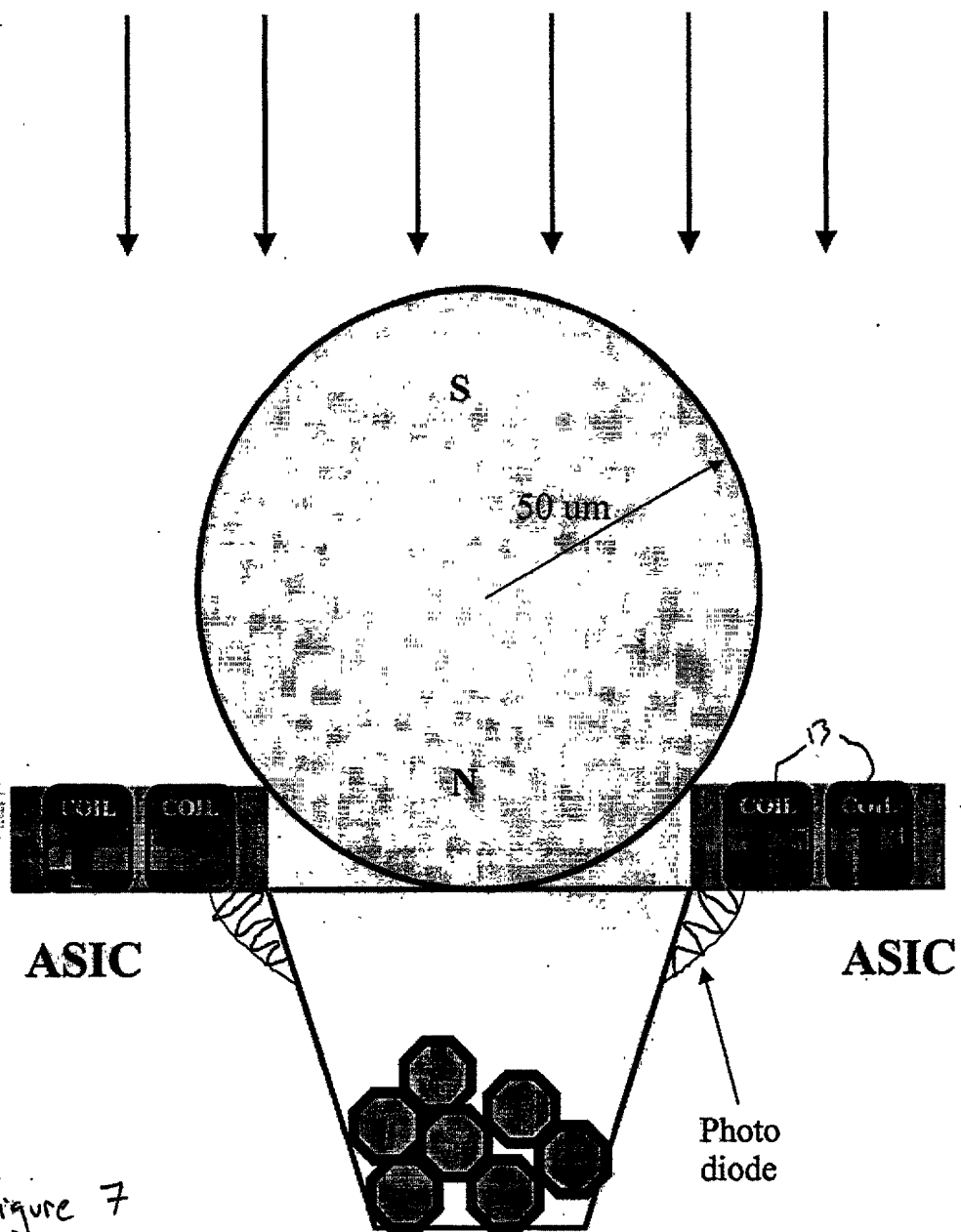


Figure 7

BEAD IN BEAD-HOLDER POCKET ON NON-SENSOR CHIP

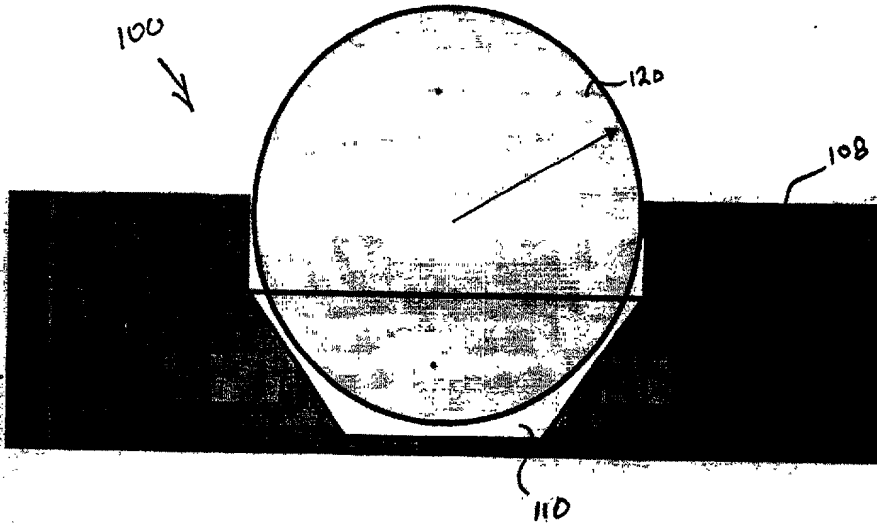


Figure 8

Particle in pocket, in place over sensor

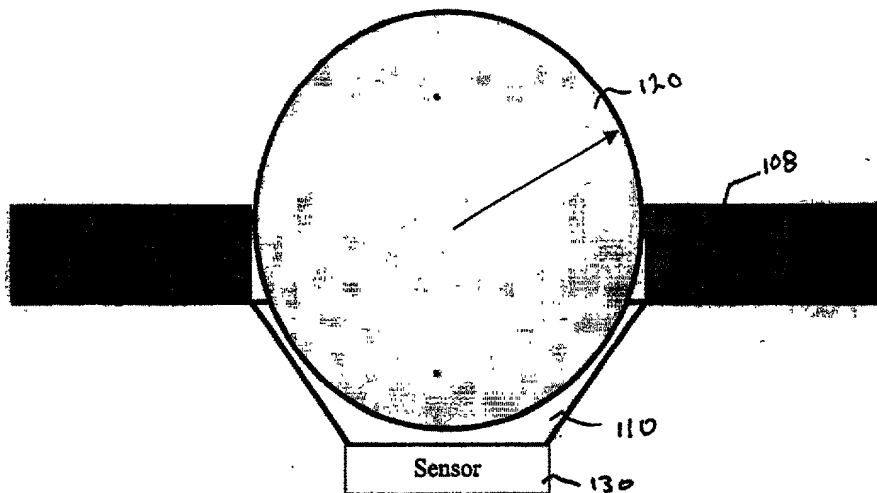


Figure 9

A few examples of some other sensor locations

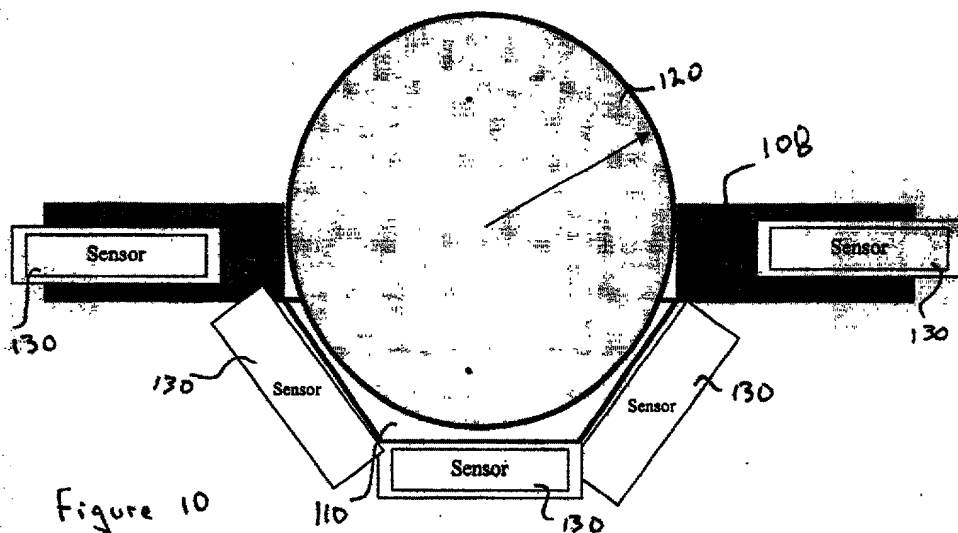


Figure 10



Array of beads in pockets over sensors

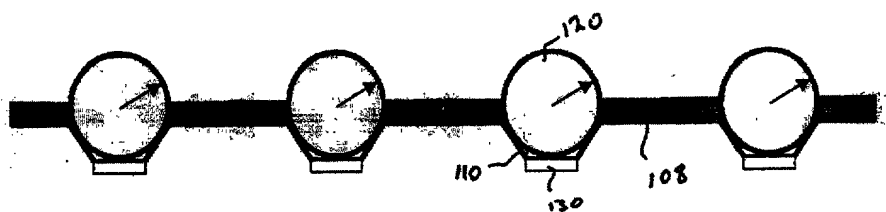
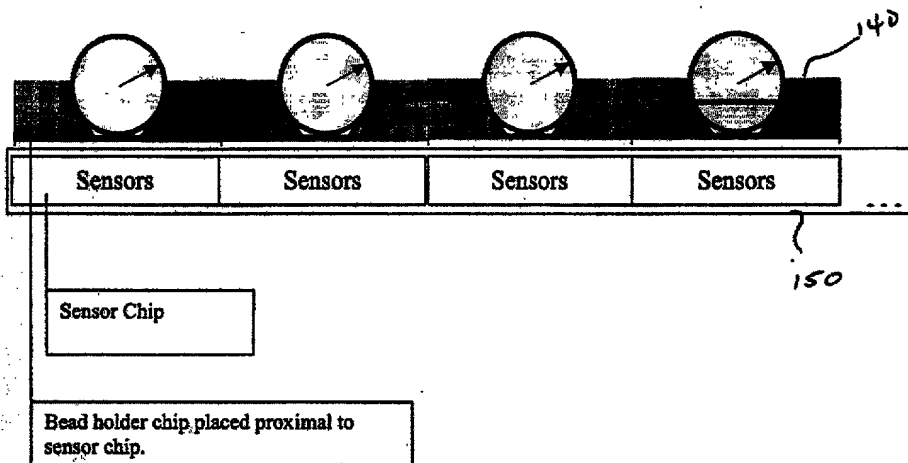


Figure 11

SEPARATELY MANUFACTURED/HANDLEABLE POCKET CHIP AND SENSOR CHIP



Example Sensors : a commercially available CMOS photodiode array

Figure 12

A key aspect is the pre-determined positioning of particles; this allows positioning with respect to sensors:

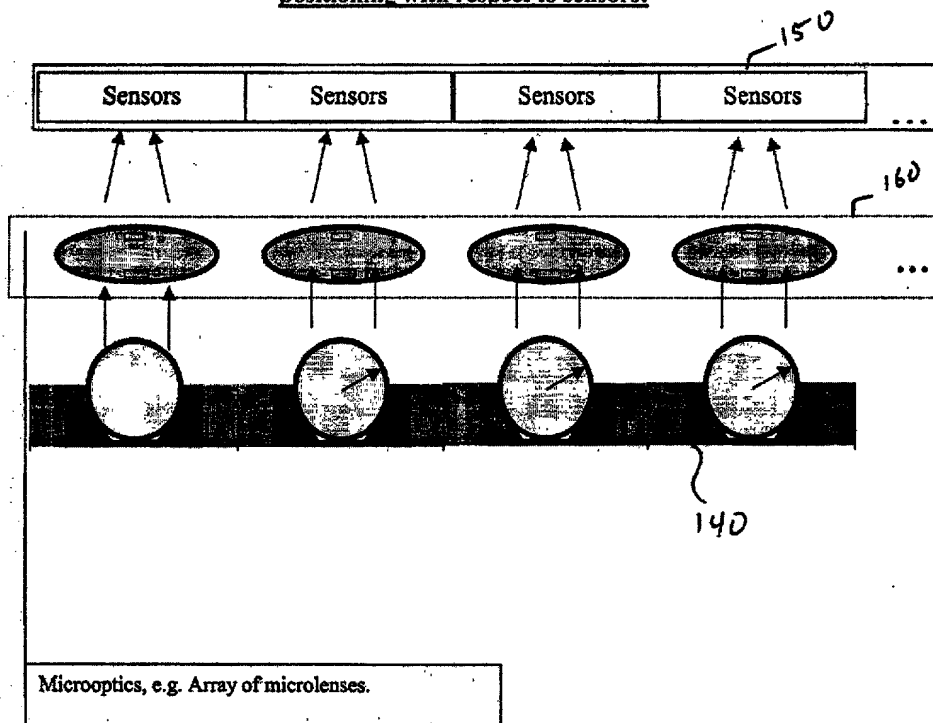
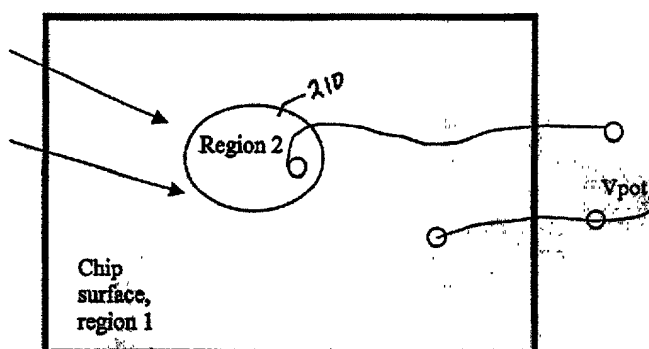
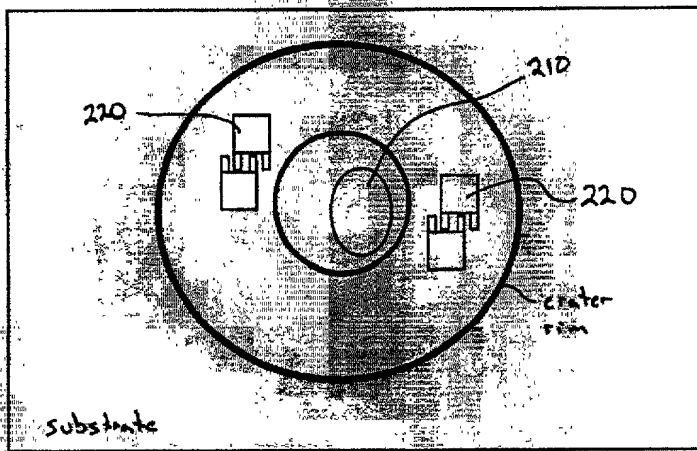


Figure 13



*Figure 14. Top view of a silicon surface with a doped region (region 2). The electric circuit is completed by Vpot, using two leads contacting each region.*



*Figure 15. A crater from above, with a doped region (e.g., photodiode) on the bottom and also two circuits with capacitive detection capability on the sloping insides of the crater.*

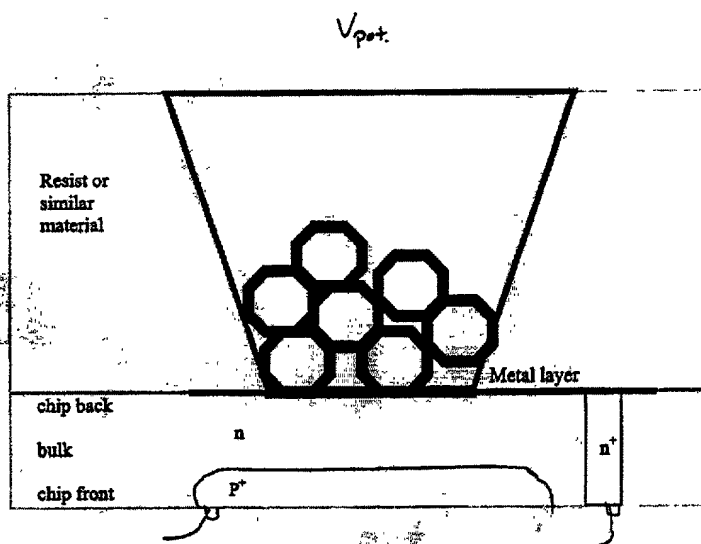


Figure 16